Shaping the Information Environment

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Information is the oxygen of the modern age. It seeps through the walls topped by barbed wire, it wafts across the electrified borders.
—Ronald Reagan, London, 14 June 1989

INFORMATION superiority (IS) is not a new concept, but the means by which the interim brigade combat team (IBCT) achieves it is. The hub of the IBCT IS effort is the information operations (IO) section, a unique assembly of disciplines designed to shape the IBCT information environment via primarily nonlethal means.[1] To understand the section's efforts to leverage the information environment, the dynamics of that information and the effects of image and perception must be considered.

The information environment is one of six dimensions of the Army's operational environment.[2] This environment is pervasive and dynamic, and is influenced by factors well beyond the IBCT's doctrinal 50x50-kilometer footprint.[3] These dynamics can be viewed in terms of Newton's first and third Laws of Motion. The first law is a body at rest tends to remain at rest or a body in motion tends to remain in motion at a constant speed in a straight line unless acted on by an outside force. The third law states that for every action there is an equal and opposite reaction.[4]

As shown in the cognitive hierarchy figure, information rises above mere data in that it contains data arrayed in a meaningful message, always with battlefield implications.[5] Information possesses weight, and when set in motion or ignored in an organization by digital or analog means, it exhibits characteristics of inertia and momentum. The quality of the information itself is subject to entropy, the degradation of meaning, analogous to the dissipation of energy expressed in the second law of thermodynamics.[6]

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The IO Sections Role

Information tends to remain at rest, perhaps in someone's inbox, until acted on by an external force. Information, especially bad news, remains in motion until acted on by an external, superior force such as updated information. The commander's critical information requirements (CCIR) are the hard standards in determining what information deserves momentum and what information should lie inert.

The brigade executive officer (XO) plays a key role in this dynamic, identifying and correcting information inertia within the staff and ensuring the system operates effectively and efficiently with little wasted energy. Giving momentum to anything that is not CCIR contributes to the organization's overall entropy and ultimately impacts on the quality and timeliness of the commander's decisions. The IO section tailors the efforts of its various disciplines to address CCIR and assists the XO in squelching irrelevant data.

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of CCIR. By synchronizing the efforts of the civil affairs (CA) teams, tactical psychological operations (PSYOP) detachments, public affairs detachments (PADs), and combat camera crews with intelligence, surveillance, and reconnaissance (ISR) assets in the reconnaissance, surveillance, and target acquisition (RSTA), information is weighted properly and contributes to the IBCT's tactical momentum.

Entropy is present in the information environment in the form of irrelevant or inaccurate information, which, in turn, consumes bandwidth on the network; lack of common doctrinal terminology; network interruptions; and stovepiping within the staff. Entropy reduces the amount of energy available to do work and reduces the clarity of the common operating picture. It can be reduced—but never entirely eliminated—by training, detailed standing operating procedures, redundant communications, and net discipline. It is important to note that reducing entropy in one system contributes to increasing entropy in an opposing system. The offensive side of IO, such as electronic warfare, physical destruction, and PSYOP, can be brought to bear on this inverse relationship.

Every action (message) has an equal and opposite reaction (effect). Information produces effects, most of which can be anticipated and exploited. The IO section leverages the information's impact on the host nation and enemy force, and synchronizes this impact with the commander's envisioned end state. Anticipating these effects enables the staff to chan-nel its energy in the right direction and posture the IBCT for success. Information synthesized within the tactical operations center (TOC) has kinetic and nonkinetic implications that an astute staff will anticipate and control. Explaining his success as the highest scoring hockey player in National Hockey League history, Wayne Gretzky said, "I don't skate to where the puck is, I skate to where it's going to be."

Perception Management and Credibility

Credibility is the coin of the realm in stability and support operations (SASO) and the desired aftereffect of shaping the information environment. Information is only as good as its perceived source, and when credibility disappears, so does legitimacy and civil-military cooperation. Image and credibility go hand in hand, and neither can be affected without impacting the other. The information environment cannot be fully controlled or IS achieved without proper emphasis on perception management.

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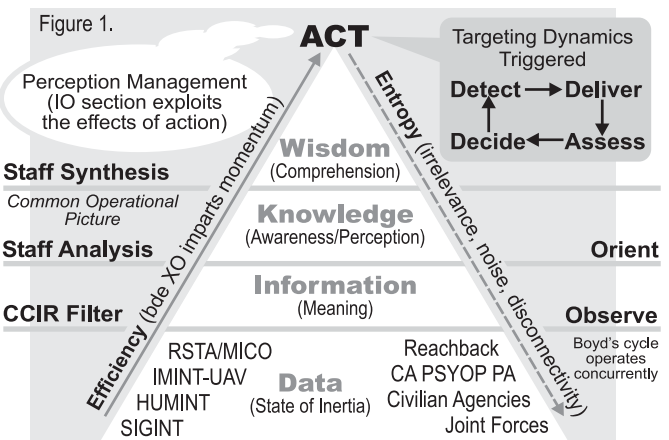
PSYOP teams have perhaps the most overt impact on both the enemy and the host nation via images and messages approved by the theater commander. By means of a well-thought-out public safety theme, PSYOP teams can employ useful, accurate public service broadcasts that gain civilian confidence and cooperation such as warning the local population of the landmine threat and encouraging safety around the U.S. military on public roads. The IO section would capitalize on this particular angle of attack by reinforcing PSYOP efforts with public affairs and combat camera involvement. Caution should be exercised when tailoring information packages for local villages, however. PSYOP and human intelligence (HUMINT) should not be used as mix-and-match information assets with CA. Overt association with PSYOP's behavior-influencing products could undermine CAs' credibility with local leaders.

CA, in its role as an interagency coordinator, interacts with a host of aid or-

Figure 1.



An IBCT adaptation of the cognitive hierarchy depicted in FM 100-6. The physics of the information environment affect the commander's decision cycle. The IO section works this dynamic to affect perception management.

ganizations typically operating under the umbrella of the United Nations High Commissioner for Refugees (UNHCR). Information generated from this relationship contributes to the IBCT common operating picture, lending a view of the civilian population that is not possible with tactical units alone. Interaction with aid organizations, such as world food programs and the International Committee of Red Cross, enables CA to network with formal and informal leadership within the host nation. CA work in Gnjilane, Kosovo, during the harvest summit of August 2000 is a fine example of the high-profile nature of host nation interaction. When handled successfully, as it was in Kosovo, U.S. forces are perceived as equitable, impartial distributors of humanitarian aid.

The PAD is second only to PSYOP in its influence on perception management. The PAD ensures that the Army story is being told accurately and that the command speaks with one voice to international media. This fosters the desired perception of unity, cohesion, and resolve. The PAD also serves as a buffer when negative information arises from an operation. The IO section can reinforce positive images and combat the effects of negative information using PSYOP and CA.

Combat camera personnel not only support the PAD effort but also record collateral damage to reinforce the CA team's assessments that it forwards to the G5. These assessments are shared with representatives for the UNHCR, who use the information to determine humanitarian aid distribution. Efficient and equitable humanitarian aid distribution affects the population's perception of the IBCT.

IS implies firm control of the images the IBCT projects. Perception management is a command responsibility, however, and not the sole domain of the IO section or its augmentees. In the information age, one bit of news footage can traverse time and space in moments and undermine months of hard work.[7] Discipline and cultural sensitivity training are paramount in perception management. Home station training in cultural sensitivity can improve perception management as well.

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The pervasive and dynamic natures of the information environment call for special vigilance from all staff elements. Understanding the dynamics of this environment sensitizes the staff to the data flowing through its sections and to how it impacts the commander's decision cycle. The brigade XO, with his macro view of the information processes in the TOC, ensures that inertia and entropy are reduced to irrelevant levels while information contributing to CCIR receives adequate momentum.

Images and perceptions—everything that a host nation or enemy sees, hears, or reads—influence the dynamics of the information environment and figure prominently in achieving IS. IS cannot be achieved without controlling how the host nation or enemy perceives U.S. forces. Perceptions can be managed or altered, and is IO section's mandate.[8] Home station training, with particular emphasis on cultural sensitivity and interaction with the media, can pay big dividends at a time when entire operations can change dramatically over a few minutes of bad press. Although the IO section is designed to bring special augmentation to bear on perception management, every member of the command is responsible for how the IBCT is perceived. ***MR***

NOTES

1. U.S. Army Field Manual (FM) 3-13, *Information Operations*, Combined Arms Doctrine Directorate, Fort Leavenworth, Kansas, Doctrine Review and Approval Group edition, November 2001, 1-51. Twelve elements of IO are currently identified with two related activities, public affairs and civil affairs.
2. FM 3-0, *Operations* (Washington, DC: U.S. Government Printing Office [GPO], 14 June 2001), 1-24.
3. IBCT Organizational and Operational Concept, 30 June 2000, chapter 1, Executive Summary, <www.lewis.army.mil/transformation>.
4. *The Columbia Encyclopedia*, 6th Ed., s.v. Motion. Reasoning by analogy has its limitations, but it serves to underscore the information dynamics at work in and around the IBCT TOC.
5. FM 100-6, *Information Operations* (Washington, DC: GPO, August 1996), figure 2-1, depicts this cognitive hierarchy.
6. Claude E. Shannon, Bell Laboratories, expressed the idea of information entropy in his seminal 1948 paper, "A Mathematical Theory of Communication." The late Shannon is considered the father of the binary system.
7. The news of a soldier accused of raping and murdering an 11-year-old Albanian girl detracted significantly from thousands of soldiers' efforts who were working in Kosovo, <www.cvv.com/2000/WORLD/europe/01/17/kosovo.soldier.02>.
8. Samuel P. Huntington, *Clash of Civilizations* (New York, NY: Simon and Schuster, November 1996). The wider the cultural rift, the more difficult it is to alter the baseline perception of U.S. forces.

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